

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Briley-Sarbo *et al.*
Application No. : 10/018,018
Filing Date : April 22, 2002
Art Unit : 3737
Title : Method of Magnetic Resonance Imaging
Examiner : Ruth S. Smith
Docket No. : NIDN-10427
Confirmation No. 3572

Mail Stop Reply Brief – Patents
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REPLY BRIEF

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I. STATUS OF CLAIMS

Claims 14-30 are pending in this application. The Examiner has rejected all of these claims. Appellants are appealing the rejections of Claims 14-30.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue for review in this appeal arises from an Examiner's Answer that was mailed on March 12, 2007.

The Examiner rejects claims 14-15, and 25 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,819,728 ("Kuhn") in view of U.S. Patent No. 5,553,619 ("Prince") or U.S. Patent No. 5,382,421 ("White"). This rejection is respectfully traversed.

The Examiner rejects claims 16-24 under 35 U.S.C. § 103(a) as being unpatentable over Kuhn in view of Prince or White and further in view of WO 97/25073 ("Gunther"). This rejection is respectfully traversed.

The Examiner rejects claims 26-27 under 35 U.S.C. § 103(a) as being unpatentable over Kuhn in view of Prince or White and further in view U.S. Patent No. 6,045,775 ("Ericsson"). This rejection is respectfully traversed.

The Examiner rejects claims 28-30 under 35 U.S.C. § 103(a) as being unpatentable over Kuhn in view of Prince or White and further in view U.S. Patent No. 5,560,360 ("Filler"). This rejection is respectfully traversed.

III. ARGUMENT

Appellants respectfully point out here that they are only addressing the Examiner's Answer ("Answer") dated September 14, 2007 herein. Please see Appellants Appeal Brief dated August 7, 2007 for a complete Responsive Brief.

Appellants respectfully request that The Board of Patent Appeals and Interferences ("Board") should reverse the Examiner's rejection based on the Examiner's Answer for the reasons set forth below.

In the Examiner's Response to Appellants Argument found on page 5 of the Examiner Answer ("Answer") dated September 14, 2007, the Examiner states that "In view of the teachings that it is known to place a contrast agent in the body via IV injection, it would have been obvious to one skilled in the art to have modified Kuhn such that the contrast agent is positioned in the vicinity of the catheter body via direct IV injection." Appellants completely disagree. Kuhn neither discloses, teaches, or suggests that the solution can be achieved by injecting a contrast agent to the part of the vasculature that is surrounding the device. In fact, Kuhn clearly states that it is highly undesirable to reproduce blood flowing around the device within the artery in high-resolution MR images, (see column 4, lines 37-41). Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051 (Fed. Cir. 1988). (emphasis added). The claims of the present invention can not then be merely assumed obvious from the Examiner's subjective view point. Appellants note that "the prior art itself must provide a motivation or reason for the worker in the art, without the benefit of the

Applicant's specification, to make necessary changes in the reference device". See, *Ex parte Chicago Rawhide Manufacturing Co.*, 226 U.S.P.Q. 438 (PTO Bd. App. 1984).

Even assuming, *arguendo*, that the references are properly combinable; Appellants respectfully submit that any such combination would teach away from the present invention. 'Teaching away' simply means teaching a solution that would not lead to the claimed subject matter.

Appellants respectfully submit again that Kuhn clearly states that it is highly undesirable to reproduce blood flowing around the device within the artery in high-resolution MR images, (see column 4, lines 37-41). Kuhn thereby teaches away from visualizing the device by enhancing the relaxation properties of the blood relative to the invasive device. Kuhn does not disclose, teach, or suggest using a contrast agent to enhance the relaxation properties of the blood surrounding the device.

According to Kuhn, only when the device has been placed correctly in the body, the contrast agent can be injected from the device to the vasculature surrounding the device. This injection of the contrast agent serves a completely different purpose than visualizing the device and safely guiding the placement of the device. As an example, according to Kuhn, the reason for injecting the contrast agent to the vasculature can be to form images of the coronary arteries (see column 10, lines 29-33). Even though the injection is done for a different reason than visualizing and guiding the placement of the device, the device will inherently be visualized. By following the teaching of Kuhn, the device will only be visualized when it has

already been placed correctly in the body. In the present invention the injection of contrast agent and visualization of the device takes place before the device has been placed correctly, in order to achieve correct placement of the device. This is clearly pointed out by the present claim 14 stating that “using imaging procedure signals.....so as to visualize said device on said MR image to guide the placement of the device in the body”. Even though the method of Kuhn inherently visualizes the invasive device when it has been placed correctly, it would not be obvious to the person skilled in the art that such visualization by injecting a contrast agent to the vasculature could be used to guide the actual placement of the device in the body.

The Examiner further states that on page 5 of the Examiner’s Answer “The Appellant has not provided any evidence to show unexpected results.....”. Appellants respectfully point to the above arguments to present the fact that there is clearly no need to show evidence of unexpected results since Kuhn does not suggest, disclose, or teach the present invention. Please also see Appellants Appeal Brief dated August 8, 2007.

Additionally, on page 5 of the Office Action, the Examiner holds that it would be obvious to one skilled in the art to modify Kuhn such that the blood pool contrast agent is administered by i.v. injection, and that such a modification involves the substitution of one known method for administering a contrast agent to an area surrounding the catheter tip for another. Appellants hold that Kuhn does not teach a method of administering a contrast agent to the area surrounding an invasive device for the purpose of visualizing and guiding the placement of the device. By modifying Kuhn such that the contrast agent is administered to the area surrounding the device in an alternative way, one would not achieve the object of guiding the

placement of the device because the device would already have been placed correctly in the body. For the purpose of guiding the placement of the device in the body Kuhn only suggests keeping the contrast agent inside the device. Without thinking of achieving the same objective by injecting contrast agent to the vasculature surrounding the device, one would not look to find alternative methods of administering a contrast agent to the vasculature of a body. In other words, one would not look to Prince or White teaching a method of administering a contrast agent to the vasculature by i.v. injection.

Furthermore, Appellants again hold that Kuhn does not suggest visualizing and guiding the placement of an invasive device by injecting a contrast agent to the vasculature surrounding the device rather than into the device itself. Kuhn administers a contrast agent to the vasculature after the device is placed correctly in the body, whereas the present invention involves administering the contrast agent to the vasculature in order to place the device in the body.

Accordingly, as disclosed in the present invention, the guiding of the placement of an invasive device in the body in this specific way involves an unobvious step.

Appellants therefore respectfully request that the Board should reverse the Examiner's obviousness rejection of claims 14-30.

IV. CONCLUSION

In view of the foregoing, Appellants respectfully request that the Board reverse the rejections of Claims 14-30 as set forth in the Office Action mailed March 12, 2007, that the Board allow the pending claims since they are in condition for allowance, and that the Board grant any other relief as it deems proper.

Dated: November 13, 2007

Respectfully submitted,

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